

Full Length Research Paper

A review on the role of extension service for agricultural transformation with particular Emphasis on Ethiopia

¹Mengistie Mossie and ²Belete Meseret

¹Department of Rural Development and Agricultural Extension, University of Gondar, Ethiopia

²Department of Rural Development and Agricultural Extension, Haramaya University, Ethiopia

Corresponding Author's E-mail: mengistiemossie@gmail.com

Accepted 2nd January, 2015

Transforming Ethiopian agriculture from its current subsistence orientation into market orientated production system forms the basis of the agricultural development strategy of the government of Ethiopia. The agricultural extension service is one of the institutional support services that have a central role to play in the transformation process. Agricultural extension in Ethiopia has remained one of the prime movers in the development of agriculture and invariably in the rural development. This paper reviewed the role of extension services in the development of agriculture and rural transformation in Ethiopia. It is the belief of this paper that no nation will have real growth in the agricultural sector without effective extension service. It is also the belief of this paper that total eradication of agricultural development problems can be achieved through extension service approach if the role of extension is properly conceived and effectively administered.

Keywords: Agricultural transformation, extension service, prime mover, central role

INTRODUCTION

Three out of four poor people in the developing world live in rural areas, and most of them depend directly or indirectly on agriculture for their livelihoods. In the twenty-first century, agriculture remains a fundamental tool for lifting them out of poverty, as has been highlighted in the World Development Report 2008 (World Bank, 2007c). The recent food crisis has further underlined the urgency of supporting agricultural development. Providing economic services, such as agricultural extension, is essential in using agriculture for development. Generally, the triple challenge of market, state, and community failure can often result in the poor provision of agricultural and rural services such as agricultural extension, rural water supply, etc., and poor provision of these services is a major obstacle to agricultural and rural development. Often, in many developing countries the state may not be very effective in providing these services either, because they are difficult to supervise for two reasons: (1) services such as agricultural extension are transaction-intensive-they

have to be provided every day throughout the country, even in remote areas-and (2) they require discretion and cannot easily be standardized, especially if they are to be demand driven (IFPRI, 2010).

In fact, the Millennium Development Goals cannot be reached without addressing this challenge of improving service provision. Particularly the rural poor suffer from poor service provision (World Bank, 2004a). Where elite capture prevails, they have less access to agricultural and rural services, and where the public system fails in general, they cannot easily resort to private service providers. They have to spend more of their time to access services, which affects their productivity, and it hurts them more if they have to pay bribes to access a service.

In view of the food crisis, governments and the international development community have pledged to invest more in agriculture, and agricultural service provision is an essential part of this investment agenda. Even prior to the crisis, agriculture had reemerged as a

priority on the international development agenda. While the food crisis made the urgency to invest in agriculture clear to everyone, a range of previous developments also contributed to increased attention to this sector. In Africa, heads of states made a commitment in 2003 to spend at least 10 percent of their budgetary resources on agriculture. The New Partnership for African Development (NEPAD) launched the Comprehensive Africa Agricultural Development Program (CAADP), which aims at achieving 6 percent growth for the sector. New charity foundations, such as the Bill and Melinda Gates Foundation, have also turned their attention to agriculture. Yet investing more funds alone does not result in better agricultural and rural services: It is essential to overcome the triple challenge of market failure, government failure, and community failure that makes the provision of agricultural and rural services so challenging. And it is also essential to address the perception bias that further disadvantages women in getting access to agricultural and rural services (IFPRI, 2010).

Agricultural transformation in any country is conditioned by a mixture of policy and country contexts such as land tenure, resource constraints, skills and education, research and development, infrastructure, climate change as well as fiscal and monetary regulations (CAPSA, 2012). The rapidly evolving nature of agricultural innovation processes in developing countries requires agricultural extension to make necessary transformations of classical roles that previously supported linear knowledge circulation and adoption (Ataharul et al., 2013).

Extension service in agriculture is indispensable and it offers more than just expert assistance in improvement of production and processing, it also enables flow of information and transfer of knowledge and scientific findings to practice (Dragic, 2009). Extension and advisory services will continue to play a vital role in helping small-scale farmers to improve their yields and incomes. Furthermore, extension and advisory services can and should play an important role in increasing access to knowledge, credit, inputs and markets for farmers and entrepreneurs along the value chain, and they have the potential to help farmers increase their productivity and incomes.

After decades of under-investment in agriculture, governments and donors now accept that accelerating agricultural growth requires the right sort of policies and institutions, as well as an increase in financial support, access to new knowledge, skills and markets, and improvements in communications. The reform of extension services should be part of a package of measures that help smallholders to increase productivity, earn more money and contribute to food security. "It's about reforming the way they work, and making sure that

the reforms that are underway are cost effective and sustainable" (CTA , 2012).

Agricultural extension in Ethiopia

One of the major policy shifts in Ethiopia since 1992 has been the substantial emphasis placed on improving the productivity of smallholder agriculture through increased use of a package of improved agricultural technologies. Smallholder agriculture producers are increasingly able to select economically viable technologies and practices for maximum and efficient production (MoFED, 2010).

Agriculture is a key driver of Ethiopia's long-term growth and food security (AEGD, 2010). Transforming Ethiopian agriculture from its current subsistence orientation into market orientated production system forms the basis of the agricultural development strategy of the government of Ethiopia (ILRI, 2006). The development of the Ethiopian economy heavily depends upon the speed with which agricultural growth is achieved. The rate of agricultural growth in Ethiopia in turn depends on the speed with which the current subsistence oriented production system is transformed into a market orientated production system. Among the many institutional support services that need to catalyze/support the transformation process, the agricultural extension service plays a critical role, since it contributes to the development of the skill and knowledge of farmers to adopt new and improved technologies (seed varieties and animal breeds, implements, chemicals and practices), and the approaches and processes with which the skill development and access to information are realized.

Extension in Ethiopia has gone through radical policy shift in the past 50 years, from feudalism to Marxism to a free market system (Kassa, 2009). Currently, extension is mostly provided by the public sector, operating in a decentralized manner where extension is implemented at the district level. The public sector is the single most important player, especially in terms of inputs, at the local level for smallholders. The private sector and NGOs (known to have many innovative and participatory approaches), while becoming increasingly important, are often left out of extension initiatives.

The government emphasis on commercialization of the agricultural sector has implications for the organization, staffing and operation of the agricultural extension service. The role of extension is more critical for commercial oriented farmers than for subsistence farmers. When farmers produce primarily for the market (both domestic and export markets), quality and standard of the produce become much more important than during subsistence production, since competitiveness depends partly on quality of produce.

Changing market conditions and consumer preferences require rapid adjustments in production technologies, and timely and effective transmission of market information. Post harvest handling and technologies play critical role in market oriented production. Meeting quality of produce depends heavily on the use of the right technologies and methods of production. Important in this respect is also the role the extension services have to play in linking the different public and private stakeholders involved in input–output marketing and credit supply (Berhanu et al., 2006).

Concept and scope of extension services

The crucial role of agricultural Extension (i.e. farmer education) in the social and economic development of the nation cannot be over-emphasized. Never before in Nigerian history has the necessity for educating and raising the productive capacity of our farmers been of such importance as it is today. Increased agricultural productivity depends primarily upon the acceptance of cultural and technological changes at the rural farm level.

Scope of extension services

Extension services are the different programmes/projects /recommendations, which the extension service make available to their clientele through the use of extension education process. Agricultural extension services encompass all aspects of agriculture. It includes the provision of timely information, the linking of farmers with sources of farming inputs and credit facilities and most importantly, the provision of education services to farmers.

Role of agricultural extension service

A role may be defined as a set of norms, values and interaction patterns associated with a given category of individuals. It is therefore, the job or function attached to a given status. It can be clarified with the economic concept of division of labour, which states that individuals work in different sectors of the economy. Agricultural extension service could be the government agency or ministry responsible for promoting the adoption and utilization of new scientific farming practices through educational procedures (Asiabaka et al., 2012).

Agriculture has a key role in development and poverty reduction. But beyond its role in producing food, it should also generate activities, income, and employment to facilitate rural transformation and structural change. This

is particularly the case for developing countries facing the challenges of incipient economic transitions and quickly evolving demographic context characterized by growing cohorts of new labor market entrants. While a larger labor force offers countries new opportunities for growth related to the “demographic dividend,” it also could pose socio-political risks if investments and public policies are inappropriate to support the processes underway (Sandrine et al., 2012).

Extension could play a central role in fostering sustainability through its educational programs but there has been a growing realization that traditional extension models have not been sufficiently effective in promoting adoption of sustainable agricultural practices. Since sustainable agriculture is a knowledge intensive system, it requires a new kind of knowledge, which differs from other forms on the basis of conventional agricultural practices. In fact, conventional extension system cannot accomplish sustainability in agriculture; because today's agricultural extension must consider environmental implications, social issues, and overall economic growth within the agriculture sector (Mohammad, 2009).

Public sector commitment is essential to promote agricultural extension and communication for rural development and food security. A new and expanded vision of the public sector role is overdue with respect to food security, rural development and agricultural extension. Three main recommendations are put forward to governments: (1) to develop a newly conceived policy agenda for agricultural extension and communication for rural development; (2) to adopt a diversified and pluralistic national strategy to promote agricultural extension and communication for rural development; and (3) to build a platform for dialogue and collaboration with the relevant institutions that comprise the diversity of multi-sectoral agricultural extension service providers that exist in most countries. The purpose of these recommendations is to advance the livelihoods, i.e., food security and income generation, of poor people in rural areas (FAO, 2003).

Current Extension Service in Ethiopia

Agriculture is a sector with great potential for improving rural livelihood and eradicating poverty. Resting on this potential, the government seeks to double agricultural production during the Growth and Transformation Plan (GTP) period by scaling up best practices, incentivizing production of high value crops, and expanding irrigation development and natural resource conservation. This will be supported by interventions aimed at transforming the agricultural system so that it facilitates the doubling of agricultural productivity of smallholder farmers by end of the GTP in 2015. This goal is achievable with the strategies government has identified. The challenge,

however, lies in implementing these strategies to enable smallholder farmers to scale-up productivity and increase production almost two-fold by the end of the GTP period. Since the underlying strategy is to diffuse agricultural best-practices from the model to the rest of the farmers, the role of agricultural extension services is critical in realizing this goal. It calls for cost-effective and innovative approaches to the way the agricultural sector generates and disseminates new knowledge and information to smallholder farmers (UNDP/Ethiopia, 2012).

Current extension service in the country was almost exclusively funded by government and some local and international non-governmental organizations. The fact that the extension service is provided almost by government indicates the urgent need to devise strategies to make the extension services pluralistic (multi-provider). Here in addition to government extension services there must be private extension service especially on the area of cash crop and other commodities.

Extension approach and delivery

Extension services provided in most part of the country can be categorized in to three groups:

1. Household Package
2. Regular Package and
3. Minimum Package

Problems with the current extension services in Ethiopia

The current extension service in Ethiopia is characterized by:

1. Top-down approach
2. non-participatory
3. supply driven not demand driven
4. Gender bias extension services
5. lack of staff moral
6. capacity and capability of staff
7. development agents involvement in non-extension activities
8. lack of qualified extension supervisors
9. insufficient appropriate and relevant technology options both for on crops and livestock sector
10. inadequate public funding

Top-down and non participatory nature of the extension service is pervasive throughout the country. Top-down approach is not only between development agents and farmers but also b/n the district, regional and federal level offices. The services are predominantly supply driven. Meaning farmers need extension services only to get farm inputs not to get training and advisory

services. There is also limitation of technology options both for the crop and livestock sub sectors. The wealth of indigenous knowledge of farmers can be used as source of improved technology options.

The current extension services are also confronted with problems that relate to budget, incentive structure and moral of subject matter specialists and development agents, and high turnover of same. District office of agriculture are operating with only about 50% of their manpower requirements on average compared to the number stipulated in their organizational structures. Even the majority of available staff members are diploma and certificate holders. As a result in some of the district, farmers claimed that they know better than the development agents in agricultural production, and all they needed the development agents for was only input supply. Therefore, limitation in the number and capacity of development agents were found to be a common problem of the extension service throughout the country.

A related problem with the extension service is the low morale and high mobility or turnover of development agents and subject matter specialists. Perhaps because of the incentive structure, several subject matter specialists or development agents quit the extension services and join better paying organization like non-governmental organizations.

Serious shortage of operational budget is another problem that affects the extension activities and the moral of extension personnel. For example in some districts subject matter specialists or development agents are paid only three or four days per diem by working full month on field. In addition to this shortage of transportation facilities also limits the capacity of development agents and subject matter specialists to travel to different areas of the districts. Related with the budget constraint is the serious shortage of training and demonstration materials.

With regard to the types of technologies being transferred to farmers, lack of or inadequate pilot testing of the technologies was mentioned as problem of the extension program in the country. Moreover, there was appropriate and timely evaluation of the extension services. Change of extension programs are often undertaken without any evaluation of the previous system. There was no in-built monitoring and evaluation system. Development agents are involved in several non-extension activities like credit distribution and collection of repayment, forecasting of input demand and input delivery, and peasant associations administration and adjudication.

Emerging Government Extension Strategy

Future extension services of the country are planned to center around the use of Farmers Training Center (FTC).

Those FTC are constructed with participation of the farmers themselves found in the peasant association. Those constructed farmers training centers are expected to serve as:

- 1.Center of extension service and information
- 2.place where modular training will be given for farmers up to six months
- 3.place for demonstration of different technologies
- 4.source of advice on farmers problems
- 5.place of combing indigenous and improved knowledge

It is envisioned that the FTCs will contribute to rural transformation rather than being limited to agricultural development only, and will operate on the wider principle of human resources development rather than in the limited view of transfer of technologies (TOT). It is also envisioned that the DAs will not be involved in input supply and credit collection or other non-extension related activities. The agricultural extension service at the FTCs is expected to play an active role in linking farmers with other institutional support services such as input supply, credit, cooperative promotion and agricultural produce marketing.

CONCLUSION

The role of Agricultural extension in national agricultural development is pertinent. It has been established that no nation will have real growth in the agricultural sector without effective extension service. The Agricultural Extension Organization (extension workers and services) have an important role to play in order to actualize the crucial role of agricultural extension in national development. Agricultural extension is an educational process and brings about desired behavioral change in farmers and other stakeholders. Extension also uses its own delivery mechanism to reach its clientele.

REFERENCES

- Accelerating Ethiopian Agriculture Development (2010). For Growth, Food Security, and Equity. Synthesis of findings and recommendations for the implementation of diagnostic studies in extension, irrigation, soil health/fertilizer, rural finance, seed systems, and output markets (maize, pulses, and livestock). pp1.
- Asiabaka C, Nnadi F, Ajaero J, Aja O, Ugwoke F, Ukpogson M, Onweagba A (2012).The role of extension officers and extension services in the development of agriculture in Nigeria. *Anaeto* .Vol. 1(6), pp. 180 – 185
- Ataharul H, Helen H, Odame, Cees Leeuwis (2013). *Transforming Roles of Public Extension to Strengthen Innovation: Lessons from Bangladesh*
- Berhanu G, Hoekstra D, Azage T (2006). *Commercialization of Ethiopian agriculture: Extension service from input supplier to knowledge broker and facilitator*. IPMS (Improving Productivity and Market Success) of Ethiopian Farmers Project Working Paper 1. ILRI (International Livestock Research Institute), Nairobi, Kenya. 36 pp.
- Centre for Alleviation of Poverty through Sustainable Agriculture (CAPSA), 2012. *The Role of Policies in Agricultural Transformation*, P.2.
- Centre for Agricultural and Rural Cooperation (CTA), 2012. *Revitalizing extension and advisory services, a landmark conference held in Nairobi in November 2011*, P:26
- Dragic Z, Sreten J, Zoran R (2009). *The role of knowledge, innovation and human capital in multifunctional agriculture and territorial rural development*, Belgrade, Republic of Serbia.pp2
- Food and Agriculture Organization of the United States (2003). *AGRICULTURAL EXTENSION, RURAL DEVELOPMENT AND THE FOOD SECURITY CHALLENGE*, Rome, Italy.
- ILRI (International Livestock Research Institute), 2006. *Commercialization of Ethiopian agriculture: Extension service from input supplier to knowledge broker and facilitator*.pp1.
- International Food Policy Research Institute (IFPRI) 2010. *Agricultural Extension in Ethiopia through a Gender and Governance Lens*. Development Strategy and Governance Division, International Food Policy Research Institute – Ethiopia Strategy Support Program 2, Ethiopia
- Kassa H (2009). *Historical development and current challenges of agricultural extension with particular emphasis on Ethiopia*. Ethiopian Economic Association (EEA) / Ethiopian Economic Policy Research Institute (EEPRI) Working Paper No. 2/05. Addis Ababa, Ethiopia: EEA/EEPRI. 65
- Ministry of Finance and Economic Development (MoFED). 2010. *Five years Growth and Transformation Plan (GTP): The Federal Democratic Republic of Ethiopia*.
- Mohammad S (2009). *Agricultural sustainability: Implications for extension systems*. College of Agriculture, Islamic Azad University, Rasht Branch, Rasht, Iran. E-mail: Allahyari@iaurasht.ac.ir.
- Sandrine F, Eric W, Bruno L (2012). *International Farming Systems Association 2012 Symposium Workshop 1.3: Understanding agricultural structural changes and their impacts to support inclusive policy dialogue and formulation*.
- United Nations Development Program (UNDP), 2012. *Promoting ICT based agricultural knowledge management to increase production and productivity of smallholder farmers in Ethiopia*.
- World Bank (2007c). *World Development Report 2008: Agriculture for Development*. Washington, DC: World Bank.
- World Bank (2004a). *World Development Report 2004: Making Services Work for Poor People*. Washington, DC: World Bank.